What is claimed is:

1. A method for forming a capacitor dielectric on a semiconductor substrate assembly, comprising the following steps:

providing said semiconductor substrate assembly;

forming a metal capacitor plate on said substrate assembly; and

oxidizing a portion of said metal capacitor plate to form a dielectric.

2. A method for forming a capacitor, comprising the following steps:

forming a metal capacitor plate on a substrate assembly; and

forming a dielectric from a portion of the capacitor plate.

3. The method as specified in Claim 2, further comprising the step of forming a further capacitor plate overlying the dielectric.

4. The method as specified in Claim 3, wherein said step of forming the capacitor plate comprises depositing a material to form the capacitor plate.

5. The method as specified in Claim 2, further comprising oxidizing the portion of the capacitor plate to form the dielectric.

6. The method as specified in Claim 2, further comprising the step of applying a potential across an electrolytic solution and the metal capacitor plate to oxidize said metal capacitor plate.

7. A method for forming a dielectric layer, comprising the following steps:

forming a metal layer overlying a starting substrate; and

applying a potential across an electrolytic solution and the metal layer to form the dielectric.

8. The method as specified in Claim 7, further comprising the step of oxidizing at least a portion of the metal layer to form an oxidized layer in response to said step of applying, said oxidized layer forming at least a portion of the dielectric layer.

9. A method for forming a dielectric layer, comprising the following steps:

forming a metal layer overlying a starting substrate;

applying a potential across the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer in response to said step of applying, said oxidized layer forming at least a portion of the dielectric layer.

10. A method for fabricating a wafer, comprising the following steps:

forming a metal layer overlying a starting substrate; and

applying a potential across an electrolytic solution and the metal layer.

11. A method of fabricating a wafer, comprising the following steps:

forming a metal layer overlying a starting substrate;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer in response to said step of applying to form an oxidized layer.

12. The method specified in Claim 11, further comprising forming a capacitor plate overlying the starting substrate prior to said step of forming the metal layer, said metal layer overlying said capacitor plate.

13. The method as specified in Claim 11, further comprising forming a capacitor plate overlying the oxidized layer.

14. The method as specified in Claim 11, wherein a non-oxidized portion of the metal layer forms at least a portion of a capacitor plate.

15. The method as specified in Claim 11, wherein said step of applying further comprises:

connecting a first electrode in contact with the electrolytic solution to a first terminal of a potential source; and

connecting the starting substrate to a second terminal of the potential source.

16. The method as specified in Claim 15, further comprising:

positioning a second electrode to contact the electrolytic solution; and

connecting the second electrode to the potential source.

17. The method as specified in Claim 11, further comprising the step of adjusting the potential across the electrolytic solution to control the oxidation of the metal layer.

18. The method as specified in Claim 17, further comprising:

monitoring a current in the electrolytic solution; and

adjusting the potential of the electrolytic solution to maintain a desired amount of the current.

19. A capacitor, comprising:

a first conductive plate;

a second conductive plate; and

a dielectric interposed between said first and second conductive plates, wherein said dielectric is an oxide of a material of the first conductive plate.

20. A memory system, comprising:

a monolithic memory device, comprising a capacitor, wherein the capacitor comprises:

a first conductive plate;

a second conductive plate; and

a dielectric interposed between said first and second conductive plates, wherein said dielectric is an oxide of a material of the first conductive plate; and

a processor configured to access the monolithic memory device.

21. A method for forming a dielectric layer, comprising the following steps:

forming a metal layer overlying a starting substrate;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer in response to said step of applying, said oxidized layer forming at least a portion of the dielectric layer.

22. The method as specified in Claim 21, further comprising the step of forming a capacitor plate overlying the starting substrate prior to said step of forming the metal layer.

23. The method as specified in Claim 21, further comprising the step of forming a capacitor plate overlying the oxidized layer.

24. The method as specified in Claim 21, wherein a non oxidized portion of the metal layer forms a capacitor plate.

25. The method as specified in Claim 21, wherein said step of applying comprises the following steps:

connecting a first electrode in contact with a surface of the electrolytic solution to a first terminal of a potential source; and

connecting the starting substrate to a second terminal of the potential source.

26. The method as specified in Claim 25, further comprising the following steps:

positioning a third electrode to contact the electrolytic solution; and

connecting the third electrode to a third terminal of the potential source.

27. The method as specified in Claim 21, wherein said step of applying comprises the step of adjusting the potential across the electrolytic solution to control the oxidation of the metal layer.

28. The method as specified in Claim 21, further comprising the following steps:

monitoring a current in the electrolytic solution; and

adjusting the potential of the electrolytic solution to maintain a desired amount of the current.

29. A method for forming a capacitor, comprising the following steps:

forming a first electrically conductive layer;

forming a metal layer overlying the first electrically conductive layer;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer in response to said step of applying, said oxidized layer forming at least a portion of a dielectric layer of the capacitor, the electrically conductive layer forming a lower capacitor plate.

30. The method as specified in Claim 29, further comprising forming a further electrically conductive layer overlying the dielectric layer to form an upper capacitor plate.

31. A method for forming a capacitor dielectric layer, comprising the following steps:

forming a metal layer overlying at least a portion of a starting substrate;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer;

conducting current in the electrolytic solution in response to said step of applying; and

oxidizing at least a portion of the metal layer to form a metal oxide in response to said step of conducting current, the metal oxide forming at least a portion of the capacitor dielectric layer.

32. A method for forming a capacitor, comprising the following steps:

forming a metal layer in contact with a starting substrate;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer;

conducting current in the electrolytic solution in response to said step of applying; and

oxidizing a portion of the metal layer to form a metal oxide in response to said step of conducting current, the metal oxide being the capacitor dielectric, an unoxidized portion of the metal layer being a first capacitor plate.

33. The method as specified in Claim 32, further comprising the step of forming a second capacitor plate overlying the capacitor dielectric.

34. The method as specified in Claim 32, wherein the metal layer is an initial metal layer and wherein the electrolytic solution is an initial electrolytic solution and wherein the metal oxide is an initial metal oxide, and further comprising the following steps:

forming a further metal layer to overly the initial metal oxide;

contacting the further metal layer with a further electrolytic solution;

applying a potential across the further electrolytic solution and the further metal layer;

conducting current in the further electrolytic solution in response to said step of applying a potential across the further electrolytic solution; and

oxidizing, in response to said step of conducting current, at least a portion of the further metal layer to form a further metal oxide, the further metal oxide forming a further portion of the capacitor dielectric.

35. The method as specified in Claim 34, further comprising the step of forming a second capacitor plate overlying the capacitor dielectric.

36. The method as specified in Claim 34, wherein the further electrolytic solution and the initial electrolytic solution are the same solution.

37. A method for forming a capacitor, comprising the following steps:

forming an insulative layer overlying a substrate;

masking the insulative layer to define a region in which to fabricate the capacitor;

removing the insulative layer in an unmasked region to expose the substrate;

depositing a polysilicon layer overlying the insulative layer and the substrate and contacting the substrate;

removing portions of the polysilicon layer to expose the insulative layer;

chemical vapor depositing a metal layer to overly the polysilicon layer and the insulative layer;

contacting the metal layer with an electrolytic solution;

applying an electrical potential to the electrolytic solution and the metal layer; and

oxidizing, in response to said step of applying, at least a portion of the metal layer to form a metal oxide to function as a dielectric layer.

38. The method as specified in Claim 37, further comprising forming a conductive layer overlying the metal oxide layer.

39. A dielectric layer formed by the process, comprising:

forming a metal layer overlying a starting substrate;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer in response to said step of applying, said oxidized layer forming at least a portion of the dielectric layer.

40. The dielectric layer as specified in Claim 39, further comprising forming a capacitor plate overlying the starting substrate prior to said step of forming the metal layer, said metal layer overlying said capacitor plate.

41. The dielectric layer as specified in Claim 39, wherein a non oxidized portion of the metal layer forms at least a portion of a capacitor plate.

42. The dielectric layer as specified in Claim 39, further comprising:

connecting a first electrode in contact with the electrolytic solution to a first terminal of a potential source; and

connecting the starting substrate to a second terminal of the potential source.

43. The dielectric layer as specified in Claim 42, further comprising:

positioning a second electrode to contact the electrolytic solution; and

connecting the second electrode to the potential source.

44. The dielectric layer as specified in Claim 39, further comprising the step of adjusting the potential across the electrolytic solution to control the oxidation of the metal layer.

45. The dielectric layer as specified in Claim 39, further comprising:

monitoring a current in the electrolytic solution; and

adjusting the potential of the electrolytic solution to maintain a desired amount of the current.

46. A capacitor formed by a process, comprising:

forming a first capacitor plate;

forming a metal layer overlying the first capacitor plate;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer in response to said step of applying, said oxidized layer forming at least a portion of a dielectric layer of the capacitor.

47. The capacitor as specified in Claim 46, further comprising forming a conductive layer overlying the oxidized metal layer to form a second capacitor plate.

48. A capacitor formed by a process, comprising:

forming an insulative layer overlying a substrate;

masking the insulative layer to define a region in which to fabricate the capacitor;

removing the insulative layer in an unmasked region to expose the substrate;

depositing a polysilicon layer overlying the insulative layer and the substrate and contacting the substrate;

removing portions of the polysilicon layer to expose an upper surface of the insulative layer;

depositing a metal layer to overly the polysilicon layer;

contacting the metal layer with an electrolytic solution;

applying an electrical potential to the electrolytic solution and the metal layer;

oxidizing, in response to said step of applying, at least a portion of the metal layer to form a metal oxide to function as a dielectric layer; and

forming an electrically conductive layer overlying the metal oxide.

49. The capacitor as specified in Claim 48, further comprising forming a conductive layer overlying the metal oxide.

50. A method of forming a capacitor comprising only two deposition steps.

51. The method as specified in Claim 50, further comprising:

forming a first capacitor electrode during a first deposition step; and

forming a second capacitor electrode during a second deposition step.

52. The method as specified in Claim 51, further comprising forming a dielectric layer from said first capacitor electrode.

53. A capacitor comprising:

a first capacitor electrode;

a dielectric layer formed from said first capacitor electrode; and

a second capacitor electrode.